

Work Order ID 59817

Friday, June 11, 2010 10:48:41 AM



Page 1

Item ID: D117-762-041

Accept



Setup Start



Revision ID:

Stop



Item Name: Replacement Skidtube

Start Date: 6/11/2010 Start Qty: 1.00



Cust Item ID:

Required Date: 6/18/2010 Req'd Qty: 1.00



Customer:

Reference:

Run Start



Approvals: Process Plan: *P*

Date: *10-6-14*

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr

Revision Nbr

D3582

Rev A

100

0.00



DOCUMENT CONTROL

DC

Memo

0.00

Document Control

Photocopy bluefile & type labels per PPP D117-762-041 CHG001

110

0.00



Skidtubes

Skidtubes

Memo

0.00

Skidtubes

1-Determine square end of tube and deburr
2-Drill #30 pilot holes using DT8678.
3- open holes to 5/16"

DP 10-6-14

120

0.00



BENDING MACHINE - SKIDTUBES

CNC Bend 1

Memo

0.00

CNC Delta 100 Bender

1- Bend tube as per program D3582 on CNC Bender and Dwg D3582. Use 5/16" locator pin on buggy "A". use bending aid DT9632
2- cut End end of tube as per dwg D3582

DP 10.06.14

Falio 3

DP 10-6-14

W/O:		WORK ORDER CHANGES					
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Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Stop



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

130



Skidtubes

Skidtubes

Skidtubes

0.00

Memo

0.00

~~1-Cut Fwd end of the tube using DT8185~~

2-Cut Aft end using DT8185

DP 10-6-14

3-Deburr ends

4-Drill Aft Cap holes using DT8678 ***DO NOT OPEN AFT CAP HOLE***

5-Locate DT 8973 & Drill Ground wire hole on top of Tube.

6-Install 3/16 cleco in Ground wire hole, then drill all X-Bolt holes using 3/16" drill.

7-Drill pilot holes for wearplates using DT8974

8-Open wearplate holes to Ø19/64" (0.297") as per Dwg D3582.

9- open ground wear holes to 0.391" as per section B-B

10-Open Aft Cap holes using .209" drill.

11-Drill pilot holes for section D-D and E-E. Holes must be laid out by hand. Mark out Center line and make sure that 6.65 and 5.906 measurements are respected. Double check before drilling, do not open holes to finish size.

AWM 10-06-25

DP 10-6-28

W/O:		WORK ORDER CHANGES					
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Run

Start



Stop



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Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
140 Skidtubes	Skidtubes	0.00							
Skidtubes	Memo	0.00							
Skidtubes	1-Weld fwd cap D2964 per dwg D3582 and QSI 004 A/R AL ROD Batch: <u>M114242</u> 2-Grind flush								
150 QC	QC10- Inspect visual per QSI004- ground welds	0.00							
Quality Control	Memo	0.00							
160 QC	QC5- Inspect part completeness to step on W/O	0.00							
Quality Control	Memo	0.00							

BE 10/06/28

8 10/06/29

8 10/06/29

(4)

W/O:		WORK ORDER CHANGES					
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Stop



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

170

Chemical Conversion Coat per QSI005 4.1

0.00



HandFinish

Memo

0.00

Hand Finishing

1

10/6/29

180

QC3- Inspect Part Finish

0.00



QC

Memo

0.00

Quality Control

DP

10-6-29

W/O:		WORK ORDER CHANGES					
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NOTE: Date & initial all entries

Abstract

Page 5

Accept

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272	273	274	275	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	293	294	295	296	297	298	299	300	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316	317	318	319	320	321	322	323	324	325	326	327	328	329	330	331	332	333	334	335	336	337	338	339	340	341	342	343	344	345	346	347	348	349	350	351	352	353	354	355	356	357	358	359	360	361	362	363	364	365	366	367	368	369	370	371	372	373	374	375	376	377	378	379	380	381	382	383	384	385	386	387	388	389	390	391	392	393	394	395	396	397	398	399	400	401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	417	418	419	420	421	422	423	424	425	426	427	428	429	430	431	432	433	434	435	436	437	438	439	440	441	442	443	444	445	446	447	448	449	450	451	452	453	454	455	456	457	458	459	460	461	462	463	464	465	466	467	468	469	470	471	472	473	474	475	476	477	478	479	480	481	482	483	484	485	486	487	488	489	490	491	492	493	494	495	496	497	498	499	500	501	502	503	504	505	506	507	508	509	510	511	512	513	514	515	516	517	518	519	520	521	522	523	524	5
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Setup



Stop

Customer:

Reference:

Run

Start

Stop

[illegible]

Tool ID	Tool #	Plan Code
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Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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0.00

Skidtubes

0.00

Skidtubes

Memo

1-Open X-Bolt holes to finish size as per Dwg D3582, all sections

2-Counter Sink X-BOLT holes as per Dwg D3582

3-Deburr and blow out chips from inside of tube, prep. tube for welding.

4-Bond web as per Dwg D3582 & QSI 015

A/R 241 Sike Flex Batch: M113519

Exp Date: 12/11/20

5-Weld x-bolt spacers(D2973) as per Dwg,D3582,section B-B.

A/R AL ROD Batch: m114242

6-Grind welds flush

BE 10/06/30

M 10/6/20

BE 10/06/30

QC10- Inspect visual per QSI004- ground welds

0.00

QC

Memo

-0.00

Quality Control

8/10/21

(X)

W/O:		WORK ORDER CHANGES					
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Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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Run Start

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Stop

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

210

QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

0.00

Quality Control

215

Pressure Wash per QSI005 4.3

0.00



HandFinish

Memo

0.00

Hand Finishing

220

White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum

0.00



Powdercoat

Memo

0.00

Powder Coating

START TIME 9:20
OVEN TEMPERATURE 320°
FINISH TIME 9:50

②

1 BR 10-7-1

1 BR 10-7-1

W/O:		WORK ORDER CHANGES						
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Sequence ID/
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DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

230

QC3- Inspect Part Finish

0.00

JL

10/07/05

X1

Ø

QC

Memo

0.00

Quality Control

240

HandFinishing

0.00

HandFinish

Memo

0.00

Hand Finishing

Install Wearplate & Ground Wire inserts as per Dwg D3582.

JL

10/07/05

1

Ø

W/O:		WORK ORDER CHANGES					
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Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run HoursTool ID Tool # Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

250



HandFinish

Hand Finishing

HandFinishing

0.00

=7 H

10/07/05

1

0

Memo

0.00

1-Inspect for Foreign objects

2-Install Aft cap as per Dwg D3582, Detail "C"

A/R 241 Sika Flex Batch: 1113579
Exp Date: 10/11

3-Install Wearplates as per Dwg D3582,

Note: Install Bolt and washer on Ground Wire inserts on top of tube see
section D-D of dwg D3582

*****Do not install bolts where indicated on Dwg(Note #6)*****

A/R 241 Sika Flex Batch: 1113579
Exp Date: 10/11

4-assemble o'ring as per dwg D3492 and apply o'ring lube

A/R 55-o'ring lube batch: 1114184

5- Wing Walk as per Dwg D3043 and QSI 005 4.4 1114432

260



QC

Quality Control

QC5- Inspect part completeness to step on W/O

0.00

8 10/07/05

Memo

0.00

10

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Run Hours

Tool ID

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Plan
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QtyReject
QtyReject
NumberInsp.
Stamp

270



Packaging

Packaging

0.00

Memo

0.00

Identify and pack for shipping as per PPP D117-762-041

Location:

PPP Rev:

PAR59758

280



QC

Quality Control

QC21- Final Inspection - Work Order Release

0.00

Memo

0.00

MF
10-7-6

W/O:		WORK ORDER CHANGES						
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Picklist Print

Friday, June 11, 2010 10:48:45 AM

Page 1/9

Work Order ID: 59817

Parent Item: D117-762-041

Parent Item Name: Replacement Skidtube

Comments: IPP Rev:A ☐ 07.06.11 ☐ New Issue ☐ EC

IPP Rev:B 08-02-22 change to revA as per dwg DD verified by:EC

Start Date: 6/11/2010

Required Date: 6/18/2010

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D2962-150		Manufactured	No			110	Each	31.0000	1	1			
3.540 Outer Tube, Extrut													

				<u>Location</u>		<u>Loc Qty</u>	<u>Loc Code</u>						
				HALL		31							
				28672		31							
D2964		Manufactured	No			140	Each	23.0000	1	1			
Cap													

				<u>Location</u>		<u>Loc Qty</u>	<u>Loc Code</u>						
				LG		23							
				14101		23							
D2971		Manufactured	No			190	Each	31.0000	1	1			
Cross Bolt Spacer													

				<u>Location</u>		<u>Loc Qty</u>	<u>Loc Code</u>						
				LG		31							
				44445		31							
D3584-1		Manufactured	No			190	Each	0.0000	1	1			
Web													

D2973		Manufactured	No			190	Each	180.0000	2	2			
Cross Bolt Spacer													
				<u>Location</u>		<u>Loc Qty</u>	<u>Loc Code</u>						
				LG		180							
				14636		180							

DP 10-6-14

BE 10/06/28

BE 10/06/28

B59885 D 10/06/29

BE 10/06/28

W/O:		WORK ORDER CHANGES					
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NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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Work Order ID: 59817

Parent Item: D117-762-041

Parent Item Name: Replacement Skidtube

Comments: IPP Rev:A ☐ 07.06.11 ☐ New Issue ☐ EC




IPP Rev:B 08-02-22 change to revA as per dwg DD verified by:EC

Start Date: 6/11/2010

Start Qty: 1.00

Required Date: 6/18/2010

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D3662-3  Crossbolt Spacer		Manufactured	No			190	Each	29.0000	1	1			
<div> <div>Location</div> <div>Loc Qty</div> <div>Loc Code</div> </div>													
<div> <div>LG</div> <div>29</div> <div></div> </div>													
<div> <div>44456</div> <div>29</div> <div></div> </div>													
D3662-1  Crossbolt Spacer		Manufactured	No			190	Each	25.0000	3	3		BE 10/06/30	
<div> <div>Location</div> <div>Loc Qty</div> <div>Loc Code</div> </div>													
<div> <div>LG</div> <div>25</div> <div></div> </div>													
<div> <div>39585</div> <div>5</div> <div></div> </div>													
<div> <div>55328</div> <div>20</div> <div></div> </div>													
ALS4-1032-130  Insert		Purchased	No			240	Each	5,752.000	36	36		3 BE 10/06/30	
<div> <div>Location</div> <div>Loc Qty</div> <div>Loc Code</div> </div>													
<div> <div>PKG11</div> <div>5000</div> <div></div> </div>													
<div> <div>114723</div> <div>5000</div> <div></div> </div>													
<div> <div>ST282</div> <div>305</div> <div></div> </div>													
<div> <div>110511</div> <div>38</div> <div></div> </div>													
<div> <div>114407</div> <div>267</div> <div></div> </div>													
<div> <div>ST381</div> <div>447</div> <div></div> </div>													
<div> <div>114654</div> <div>447</div> <div></div> </div>													

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Page 2

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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Work Order ID: 59817

Parent Item: D117-762-041

Parent Item Name: Replacement Skidtube

Comments: IPP Rev:A ☐ 07.06.11 ☐ New Issue ☐ EC
IPP Rev:B 08-02-22 change to revA as per dwg DD verified by:EC

Start Date: 6/11/2010

Required Date: 6/18/2010

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
ALS4-428-165		Purchased	No			240	Each	143.0000	2	2			
Inserts													

D2965



Cap, 105 Skidtube

Manufactured No

Location

FP

Loc Qty

43

Loc Code

6989

43

ST282

100

114172

100

250

Each

49.0000

1

1

x2 10107105

Location

FP4

Loc Qty

49

Loc Code

52057

48

59600

1

250

Each

7.0000

1

1

x1 10107105

D3508-3



Wearplate

Manufactured No

Location

FP21

Loc Qty

7

Loc Code

51386

1

55339

6

250

Each

8.0000

1

1

x1 10107105

D3508-9



Wearplate

Manufactured No

Location

FP21

Loc Qty

8

Loc Code

54580

8

x1 10107105

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

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Work Order ID: 59817

Parent Item: D117-762-041

Parent Item Name: Replacement Skidtube

Comments: IPP Rev:A ☐ 07.06.11 ☐ New Issue ☐ EC

IPP Rev:B 08-02-22 change to revA as per dwg DD verified by:EC

Start Date: 6/11/2010

Required Date: 6/18/2010

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D3558-3 Gasket		Manufactured	No			250	Each	18.0000	1	1			
<div> <div>Location</div> <div>FP</div> <div> <div>61391</div> <div>55468</div> </div> </div> <div> <div>Loc Qty</div> <div>18</div> <div>6</div> <div>12</div> </div> <div> <div>Loc Code</div> </div>													
D3558-9 Gasket		Manufactured	No			250	Each	23.0000	1	1		10/07/05	
<div> <div>Location</div> <div>FP</div> <div> <div>50928</div> <div>55469</div> </div> </div> <div> <div>Loc Qty</div> <div>23</div> <div>9</div> <div>14</div> </div> <div> <div>Loc Code</div> </div>													
D3558-11 Gasket		Manufactured	No			250	Each	7.0000	1	1		10/07/05	
<div> <div>Location</div> <div>FP</div> <div> <div>42254</div> </div> </div> <div> <div>Loc Qty</div> <div>7</div> <div>7</div> </div> <div> <div>Loc Code</div> </div>													
D3558-13 Gasket		Manufactured	No			250	Each	4.0000	1	1		10/07/05	
<div> <div>Location</div> <div>FP</div> <div> <div>42255</div> <div>55467</div> </div> </div> <div> <div>Loc Qty</div> <div>4</div> <div>2</div> <div>2</div> </div> <div> <div>Loc Code</div> </div>													

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

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Work Order ID: 59817

Parent Item: D117-762-041

Parent Item Name: Replacement Skidtube

Comments: IPP Rev:A ☐ 07.06.11 ☐ New Issue ☐ EC

IPP Rev:B 08-02-22 change to revA as per dwg DD verified by:EC

Start Date: 6/11/2010

Required Date: 6/18/2010

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D3508-11 Wearplate		Manufactured	No			250	Each	15.0000	1	1			
				<u>Location</u>				<u>Loc Qty</u>		<u>Loc Code</u>			
				FP16				15					
				(54644)				15					
D3508-13 Wearplate		Manufactured	No			250	Each	14.0000	1	1			
				<u>Location</u>				<u>Loc Qty</u>		<u>Loc Code</u>			
				FP				14					
				(54645)				14					
D3492-051 Plug Assembly		Manufactured	No			250	Each	58.0000	2	2			
				<u>Location</u>				<u>Loc Qty</u>		<u>Loc Code</u>			
				FP013				58					
				(44633)				8					
				55622				50					
D3492-049 Plug Assembly		Manufactured	No			250	Each	33.0000	2	2			
				<u>Location</u>				<u>Loc Qty</u>		<u>Loc Code</u>			
				FP011				33					
				(44632)				3					
				(55621)				30					

X1 10/07/05

X1 10/07/05

X2 10/07/05

X2

X1 10/07/08
X1 10/07/05

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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Work Order ID: 59817

Parent Item: D117-762-041

Parent Item Name: Replacement Skidtube

Comments: IPP Rev:A ☐ 07.06.11 ☐ New Issue ☐ EC
IPP Rev:B 08-02-22 change to revA as per dwg DD verified by:EC

Start Date: 6/11/2010

Required Date: 6/18/2010

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D3492-053		Manufactured	No			250	Each	31.0000	6	6			
Plug Assembly													

Location	Loc Qty	Loc Code
FP	31	

AN960JD10L NAS1149D0332J Purchased No

Washer

Location	Loc Qty	Loc Code
54641	31	
	31	
	250	
	Each	
	3,779.000	
	2	

x 6 M 10/07/05

Location	Loc Qty	Loc Code
ST348	3779	

AN3C4A Purchased No

BOLT

Location	Loc Qty	Loc Code
110985	3779	
	250	
	Each	
	1,525.000	
	28	

x 2 M 10/07/05

Location	Loc Qty	Loc Code
ST350	1525	

114103	501
114108	14
114416	12
114523	2
14859	996

x 28 M 10/07/05

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W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

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Page 7 / 9

Work Order ID: 59817

Parent Item: D117-762-041

Parent Item Name: Replacement Skidtube

Comments: IPP Rev:A 07.06.11 New Issue EC

IPP Rev:B 08-02-22 change to revA as per dwg DD verified by:EC

Start Date: 6/11/2010

Required Date: 6/18/2010

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
AN3CSA		Purchased	No			250	Each	352.0000	2	2			
Bolt													

Location	Loc Qty	Loc Code
ST350	337	
114330	11	
114523	18	
114808	308	
ST351	15	
113121	10	
114108	5	

AN960JD416L	NAS1149D0416J	Purchased	No			250	Each	371.0000	2	2			
Washer													

Location	Loc Qty	Loc Code
ST346	371	
110153	371	

AN960C10L	NAS1149C0332 R	Purchased	No			250	Each	0.0000	28	28			
washer													

1115000

x2 10107105

x2 10107105

x28 10107105

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

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Page 8 / 9

Work Order ID: 59817

Parent Item: D117-762-041

Parent Item Name: Replacement Skidtube

Comments: IPP Rev:A ☐ 07.06.11 ☐ New Issue ☐ EC

IPP Rev:B 08-02-22 change to revA as per dwg DD verified by:EC

Start Date: 6/11/2010

Required Date: 6/18/2010

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
AN4-4A		Purchased	No			250	Each	224.0000	2	2			
Bolt													

Location	Loc Qty	Loc Code
ST356	200	
114615	200	
ST361	24	
108138	6	
111295	18	

NAS1611-012

Purchased

No

250

Each

122.0000

6

6

O-RING

Location	Loc Qty	Loc Code
FP	122	
108673	21	
113845	101	

NAS1611-015

Purchased

No

250

Each

9.0000

2

2

O-RING

Location	Loc Qty	Loc Code
FP	9	
107178	9	

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

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Page 9 / 9

Work Order ID: 59817



Parent Item: D117-762-041



Parent Item Name: Replacement Skidtube

Start Date: 6/11/2010

Required Date: 6/18/2010

Comments: IPP Rev:A ☐ 07.06.11 ☐ New Issue ☐ EC

Start Qty: 1.00

Required Qty: 1.00

IPP Rev:B 08-02-22 change to revA as per dwg DD verified by:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
NAS1611-016		Purchased	No			250	Each	113.0000	2	2			



O-RING



Location	Loc Qty	Loc Code
FP	113	
107178	13	
112492	50	
113524	50	

x2 11/10/07/05

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

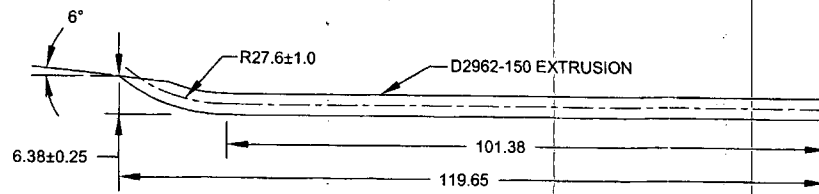
NOTE: Date & initial all entries

PARTS LIST FOR D3582-041 SKIDTUBE ASSEMBLY

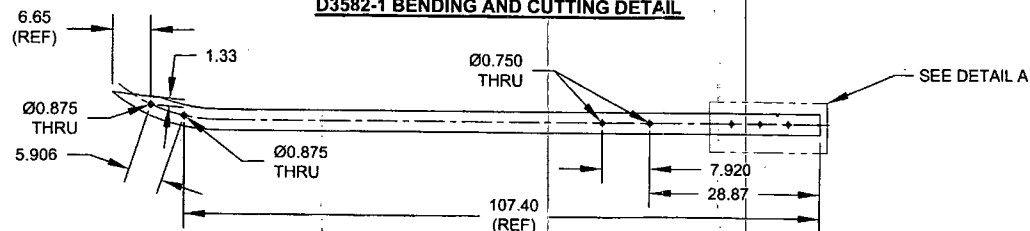
Qty	Part Number	Description
X	D3582-041	SKIDTUBE ASSEMBLY
1	D2962-150	EXTRUSION
1	D2964	CAP
1	D2965	CAP
1	D2971	CROSS BOLT SPACER
2	D2973	CROSS BOLT SPACER
2	D3492-049	PLUG ASSEMBLY
2	D3492-051	PLUG ASSEMBLY
6	D3492-053	PLUG ASSEMBLY
1	D3508-3	WEARPLATE
1	D3508-9	WEARPLATE
1	D3508-11	WEARPLATE
1	D3508-13	WEARPLATE
1	D3558-3	GASKET
1	D3558-9	GASKET
1	D3558-11	GASKET
1	D3558-13	GASKET
1	D3584-1	WEB
3	D3662-1	CROSS BOLT SPACER
1	D3662-3	CROSS BOLT SPACER
36	AELS-1032-130	INSERT
2	ALS7-428-165	INSERT
28	AN3C4A	BOLT
2	AN3-5A	BOLT
2	AN4-4A	BOLT
28	AN960C10L	WASHER
2	AN960JD10L	WASHER
2	AN960JD416L	WASHER

GENERAL NOTES:

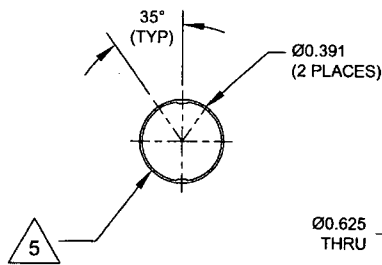
- ALL DIMENSIONS ARE IN INCHES
- TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- WELDING TO BE DONE PER DART QSI 004.
- INSERT D3584-1 WEB TO LOCATION SHOWN OFF AFT END OF SKIDTUBE AND BOND WEB INTO OUTER TUBE WITH NON-STRUCTURAL SIKAFLEX-241/-291 ADHESIVE PER DART QSI 015 AFTER BENDING.
- USE DART DRILL TEMPLATE DT8900 TO LOCATE AND DRILL $\varnothing 0.297$ HOLES (36 PLACES) FOR WEARSHOE INSERTS. INSTALL AELS-1032-130 PER SECTION G-G (36 PLACES) AFTER FINISH. SEAL WEARPLATE BOLTS WITH SIKAFLEX-241/-291.
- DO NOT INSTALL AN3C4A BOLTS AND AN960C10L WASHERS IN INDICATED LOCATIONS.
- FINISH:
 - CHEMICAL CONVERSION COAT PER DART QSI 005 4.1 PRIOR TO INSERTING D3584-1 WEB.
 - POWDER COAT ASSEMBLY GLOSS WHITE (REF 4.3.5.1) PER DART QSI 005 4.3.
 - ANTI-SKID PAINT AS INDICATED TO 1.00 ABOVE CENTER LINE PER DART QSI 005 4.4



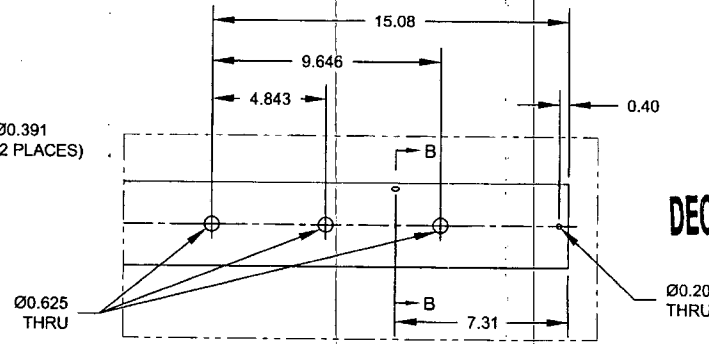
D3582-1 BENDING AND CUTTING DETAIL



D3582-1 DRILLING DETAIL



SECTION B-B
SCALE 1:5



DETAIL A
SCALE 1:5

DEO ATTACHED

RELEASED
07-11-2007

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 39817

BS10-6-11

REV.	DESCRIPTION	PH	DATE
A	NEW ISSUE		07.06.08
DESIGN	PH		
DRAWN	PH		
CHECKED			
MFG. APPR.			
APPROVED			
DE APPR.			
DATE	07.06.08		

DART AEROSPACE USA, INC
PORT HADLOCK, WA
DRAWING NO. D3582
REV. A
SHEET 1 OF 2
TITLE BK 117 SKIDTUBE ASSEMBLY
SCALE 1:20
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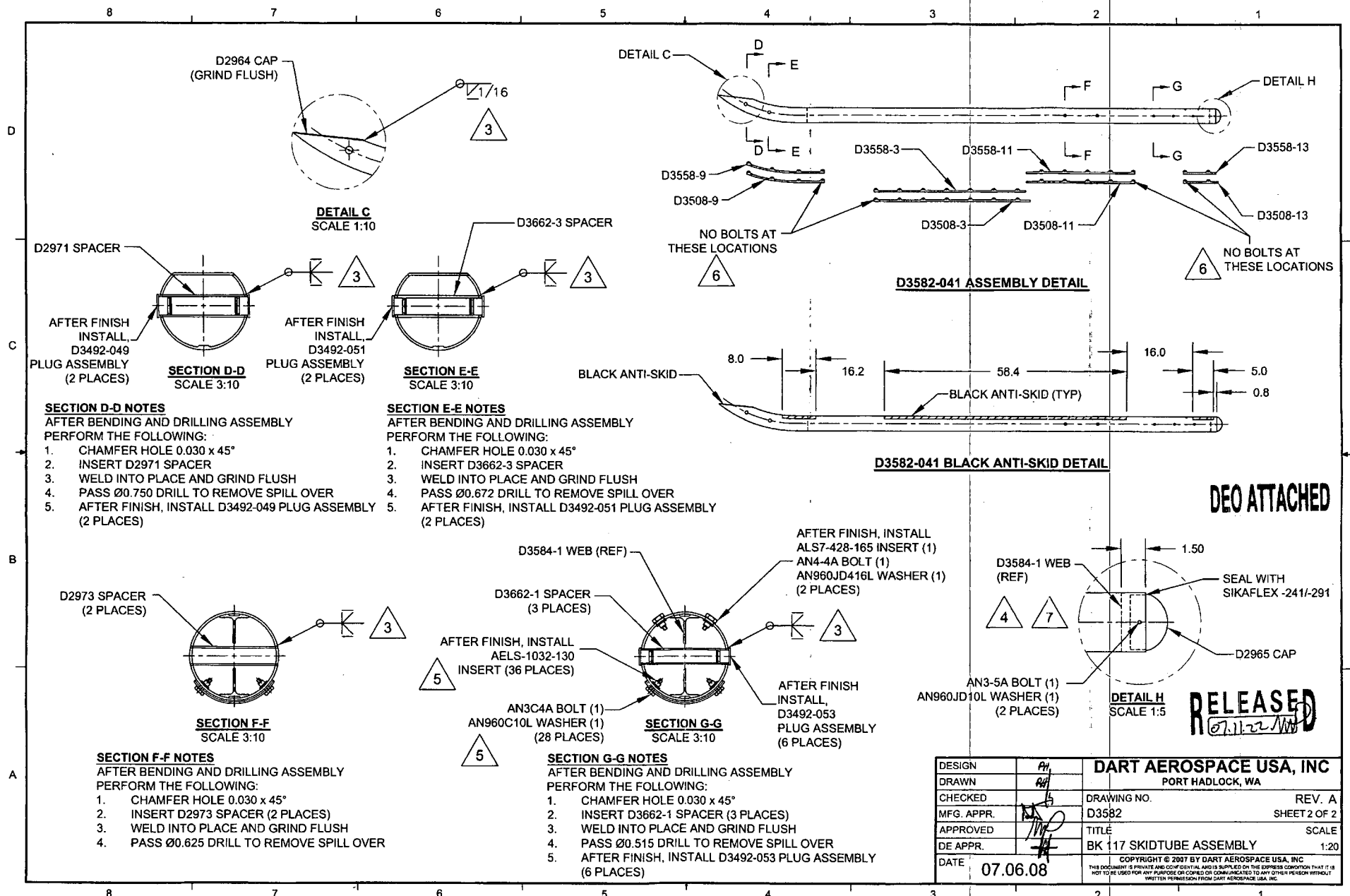
W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

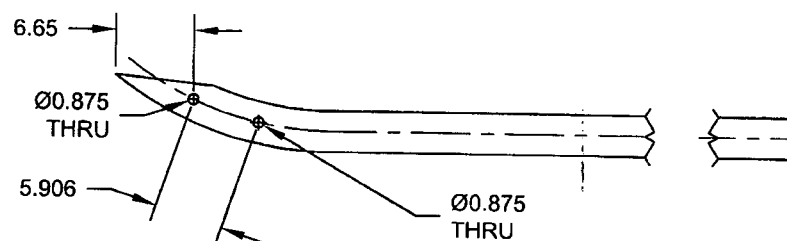
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

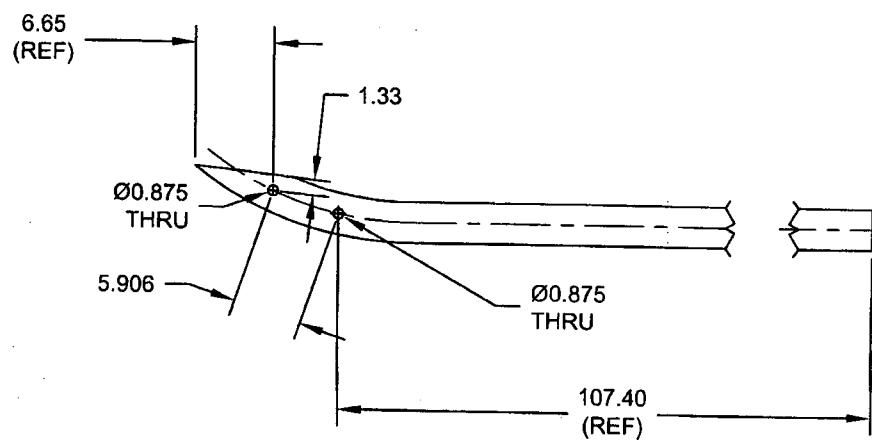
DRAWING NO. D3582	TITLE BK 117 SKIDTUBE ASSEMBLY	REV. A	DART AEROSPACE USA, INC ENGINEERING ORDER		D.E.O. NO. D3582-A-1	SHEET NO. SHEET 1 OF 1	SCALE NTS
DRAWN <i>PH</i>	CHECKED <i>B</i>	MFG. APPR. <i>E</i>	APPROVED <i>WJ</i>		DE APPR. <i>WJ</i>		
DATE 09.04.06	DATE 04.04.06	DATE 09.04.06	DATE 19/04/06	DATE 09.04.06	DATE 09.04.06		

FOR EASE OF MANUFACTURE AND TO ENSURE THE FIT OF BRISTOL WIRESTRIKE SKID GEAR DEFLECTOR:
UPDATE DIMENSIONING OF 2 FWD HOLES ON SHEET 1 AS SHOWN

IS:



WAS:



RELEASED
09/04/22 *WJ*

w/039817

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

NO. 220

AWS D17.1.2001
QUALIFICATION TEST RECORD

Name: Barclay Elliott
Job number: 54161
Part number: D17-762-041
Description: 17 sk.d tube
Welding Process: Tig[☒] Mig[]
Base material: Aluminum
Current: AC[] DC[]

TEST REQUIREMENTS AND RESULTS

Visual: pass[☒] fail[]
Penetration: pass[☒] fail[]

UNACCEPTABLE

Cracks: pass[☒] fail[]
Undercut: pass[☒] fail[]
Pin holes: pass[☒] fail[]
Overlap (cold lap): pass[☒] fail[]
Porosity (surface): pass[☒] fail[]
Coloration: pass[☒] fail[]

Qualifier [Signature] Date of Test Coupon 09-12-10

Welder Barclay Elliott Date of Test Coupon 09/12/10

The above named individual is qualified in accordance with AWS D17.1.2001 to weld